Yellow

Yellow Overview

Volunteer monitoring began at Yellow Lake in 2003 and continued through 2004. The data indicate lake is moderately high in primary productivity (mesotrophic - eutrophic) with good to fair water quality.

Yellow Lake has public access points, but no boat launch. Lake users should watch for early infestations of Eurasian milfoil, Brazilian elodea and other noxious aquatic weeds.

Physical Parameters

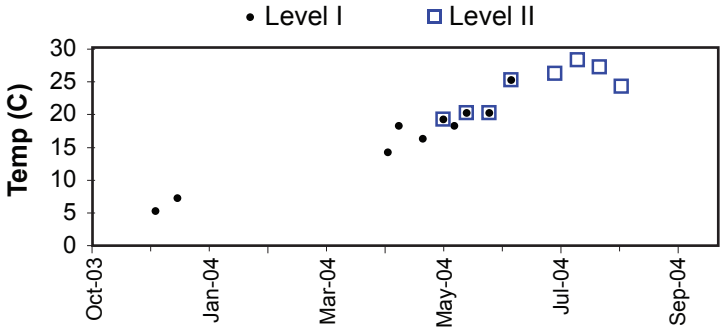
Secchi transparency ranged from 1.3 to 2.2m from April – October, averaging 1.8 m which placed it in the lower range of water clarity for small lakes monitored in 2004. Surface water temperatures through the same period reached 28.0 degrees Celsius, which was the warmest temperature recorded among the group.

There were some records of precipitation and water level kept through the year, which suggested sensitivity to large rain events, but there was not enough information to analyze lake level patterns.

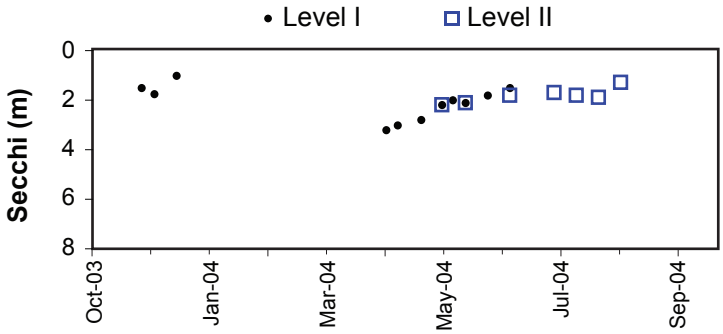
Nutrient Analysis and TSI Ratings

Total nitrogen increased from April through August, while total phosphorus also rose over the sample period, but at a much slower rate. The N:P ratio ranged from 23 to 36, with the lower values in the beginning of the season. There were no samples taken during September and October.

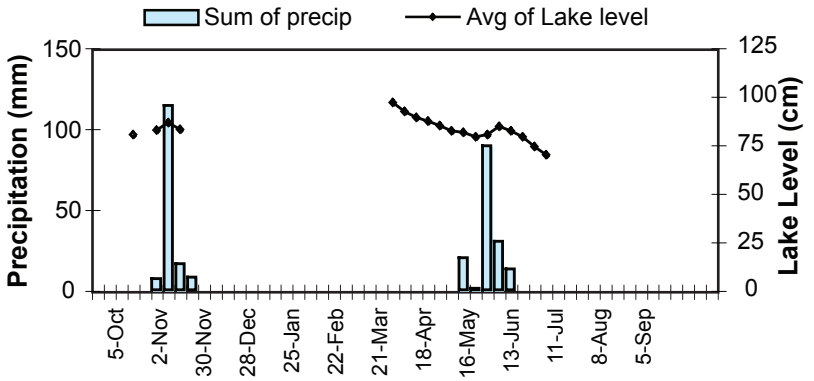
Lake Temperature



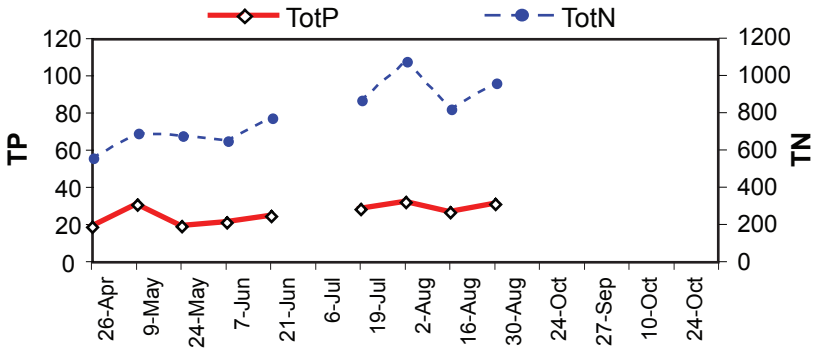
Secchi Depth



Lake Level and Precipitation



Nutrient Analysis



Yellow Lake is too shallow for profile sampling to provide important information.

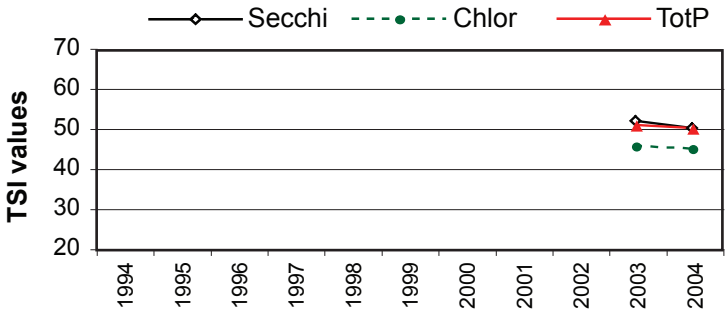
In 2004 the average TSI-chlorophyll was in the mid mesotrophic range, lower than the other two indicators which were just above the threshold for eutrophy. This was similar to values in 2003.

Chlorophyll Concentrations and Algae

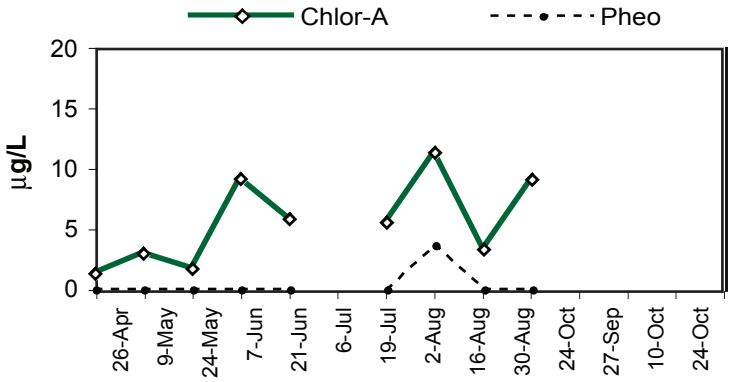
Chlorophyll peaked in early June, early August and late August. The first and second peaks were characterized by small, unidentified chlorophyte cells, while the late August community was dominated by the chrysophytes *Dinobryon* and an accompanying unidentified species. The dinoflagellate *Ceratium hirundinella* was also prominent.

Date	Secchi	depth-m	degC	Chlor-A	TP µg/L	TN µg/L
NO DATA AVAILABLE						

TSI Ratings



Chlorophyll a Concentrations (ug/L)



Common Algae

	Group
Ceratium hirundinella	Dinophyta
unidentified colony	Chlorophyta
Botryococcus braunii	Chlorophyta

Yellow

2004 Level I Data

Daily Data Summary					Weekly Data Summary						
Week of	Sum of precip. (mm)	# of days	Avg of lake level (cm)	# of days	Sample date	Sample time	Secchi (m)	Temp (°C)	Algae* (Shore)	Algae* (at site)	Goose Count*
28-Sep-03											
5-Oct-03											
12-Oct-03											
19-Oct-03											
26-Oct-03	0.0	1	80.0	1							
2-Nov-03					1-Nov-03	15:30	1.5		P1	P1	0
9-Nov-03	7.0	7	82.4	5	9-Nov-03	14:30	1.8	5.0	P1	P3	0
16-Nov-03	114.0	7	86.3	7							
23-Nov-03	16.0	7	82.7	7	23-Nov-03	14:10	1.0	7.0	P1	P1	0
30-Nov-03	8.0	1									
7-Dec-03											
14-Dec-03											
21-Dec-03											
28-Dec-03											
4-Jan-04											
11-Jan-04											
18-Jan-04											
25-Jan-04											
1-Feb-04											
8-Feb-04											
15-Feb-04											
22-Feb-04											
29-Feb-04											
7-Mar-04											
14-Mar-04											
21-Mar-04											
28-Mar-04			96.7	3							
4-Apr-04			92.0	6	4-Apr-04	16:55	3.2	14.0	P2	P2	2
11-Apr-04			88.9	7	11-Apr-04	16:00	3.0	18.0	P2	P3	1
18-Apr-04			86.9	7							
25-Apr-04			84.7	7	26-Apr-04	19:30	2.8	16.0	P2	P2	4
2-May-04			82.0	7							
9-May-04	20.0	6	81.3	6	9-May-04	18:45	2.2	19.0	P2	P2	2
16-May-04	1.0	7	79.0	1	16-May-04	19:00	2.0	18.0	P1	P2	8
23-May-04	89.0	7	80.2	6	24-May-04	18:30	2.1	20.0	P2	P2	0
30-May-04	30.0	6	84.3	7							
6-Jun-04	13.0	2	82.0	2	7-Jun-04	20:15	1.8	20.0	P2	P2	0
13-Jun-04	0.0	3	79.0	6							
20-Jun-04	0.0	7	74.0	5	21-Jun-04	19:00	1.5	25.0	P2	P2	0
27-Jun-04	0.0	4	69.5	2							
4-Jul-04											
11-Jul-04											
18-Jul-04											
25-Jul-04											
1-Aug-04											
8-Aug-04											
15-Aug-04											
22-Aug-04											
29-Aug-04											
5-Sep-04											
12-Sep-04											
19-Sep-04											
26-Sep-04											
Min	0.0		69.5			**Min**	1.5	14.0			
Max	114.0		96.7			**Max**	3.2	25.0			
Total	298.0										

* See introduction for discussion of algae assessment and goose count methods.

2004 Level II Data

Date (2004)	Temp (°C)	Secchi (m)	Chl-*a* (µg/l)	TP (µg/l)	TN (µg/l)	Algae Obsv.	N:P	Calculated TSI		
								Secc	chl-a	TP
26-Apr	13.0	2.8	1.40	18.4	560	2	30	45.1	33.9	46.2
9-May	19.0	2.2	3.04	30.4	695	2	23	48.6	41.5	53.4
24-May	20.0	2.1	1.80	18.9	679	2	36	49.3	36.3	46.6
7-Jun	20.0	NR	9.21	21.0	653	2	31		52.4	48.1
21-Jun	25.0	1.8	5.87	24.2	777	2	32	51.5	47.9	50.1
6-Jul										
19-Jul	26.0	1.7	5.61	28.1	873	1	31	52.3	47.5	52.3
2-Aug	28.0	1.8	11.40	31.7	1080	2	34	51.5	54.4	54.0
16-Aug	27.0	1.9	3.36	26.3	825	2	31	50.7	42.5	51.3
30-Aug	24.0	1.3	9.13	30.9	965	2	31	56.2	52.3	53.6
24-Oct										
27-Sep										
10-Oct										
23-Oct										
	Temp (°C)	Secchi (m)	Chl-*a* (µg/l)	TP (µg/l)	TN (µg/l)	Algae	N:P	Calculated TSI		
								Secc	chl-a	TP
Mean	22.4	2.0	5.6	25.5	789.7	1.9	31	50.7	45.4	50.6
Median	24.0	1.9	5.6	26.3	777.0	2	31	51.1	47.5	51.3
Min	13.0	1.3	1.4	18.4	560.0	1	23	45.1	33.9	46.2
Max	28.0	2.8	11.4	31.7	1080.0	2	36	56.2	54.4	54.0
Count	9	8	9	9	9	9	9	8	9	9

TSI Average = 48.9